

Title (en)  
Compressors with integrated secondary air flow systems

Title (de)  
Kompressoren mit integriertem Sekundärluftflusssystemen

Title (fr)  
Compresseurs avec des systèmes de flux d'air secondaires intégrés

Publication  
**EP 2559858 A3 20180110 (EN)**

Application  
**EP 12166089 A 20120427**

Priority  
US 201113182976 A 20110714

Abstract (en)  
[origin: US2013017066A1] A compressor includes a rotor platform; a rotor blade; and a casing having an inner surface surrounding the tip and spaced radially outwardly from the tip to define a gap. A secondary air flow system includes a bleed inlet configured to remove secondary air flow from the primary air flow; an injection opening disposed in the inner surface of the casing upstream of the bleed inlet; an accessory conduit; and a plenum fluidly coupled to the bleed inlet, the injection opening, and the accessory conduit. The bleed inlet and plenum at least partially define a secondary air flow path such that a first portion of the secondary air flow is directed in through the bleed inlet, through the plenum, and out through the injection opening and a second portion of the secondary air flow is directed in through the bleed inlet, through the plenum, and out through the accessory conduit.

IPC 8 full level  
**F01D 9/04** (2006.01); **F01D 25/24** (2006.01); **F02C 9/18** (2006.01)

CPC (source: EP US)  
**F01D 9/04** (2013.01 - EP US); **F01D 25/24** (2013.01 - EP US); **F02C 9/18** (2013.01 - EP US); **F04D 27/023** (2013.01 - EP US);  
**F04D 27/0238** (2013.01 - EP US); **F04D 29/545** (2013.01 - EP US); **F04D 27/0215** (2013.01 - EP US)

Citation (search report)  
• [A] EP 1288466 A1 20030305 - SNECMA MOTEURS [FR]  
• [A] US 5203162 A 19930420 - BURGE JOSEPH C [US]  
• [A] GB 2270118 A 19940302 - SNECMA [FR]  
• [A] EP 1659293 A2 20060524 - ROLLS ROYCE DEUTSCHLAND [DE]  
• [A] EP 2000649 A2 20081210 - ROLLS ROYCE DEUTSCHLAND [DE]

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**US 10072522 B2 20180911; US 2013017066 A1 20130117**; EP 2559858 A2 20130220; EP 2559858 A3 20180110; EP 2559858 B1 20180725;  
US 10907503 B2 20210202; US 2018347401 A1 20181206

DOCDB simple family (application)  
**US 201113182976 A 20110714**; EP 12166089 A 20120427; US 201816108907 A 20180822